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(11) **EP 0 673 848 B1**

(12) **EUROPEAN PATENT SPECIFICATION**

(45) Date of publication and mention  
of the grant of the patent:  
28.10.1998 Bulletin 1998/44

(51) Int. Cl.<sup>6</sup>: **B65D 25/28**

(21) Application number: **95301931.2**

(22) Date of filing: **23.03.1995**

(54) **Container with handle**

Behälter mit Handgriff

Réceptient avec anse

(84) Designated Contracting States:  
**BE DE DK FR NL**

(30) Priority: **24.03.1994 GB 9405894**

(43) Date of publication of application:  
**27.09.1995 Bulletin 1995/39**

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**GB-A- 2 113 082** **US-A- 2 289 824**

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## Description

This invention relates to an aquatic plants container immersable in water and a handle therefor.

Aquatic plants are seeded in a pot that has a coarse mesh which allows water to permeate freely the bedding in which the plant is seeded. These pots are immersed in water until the plant is ready for sale. At this point, the plants and pots need to be lifted from their bedding pens and relocated to an area where they are more readily available for public inspection and purchase. When members of nursery staff are relocating these plants, they often have to move large numbers of pots in a manner such that the contents of the pots remain undamaged. Thus, there is a need for a device that enables personnel quickly to attach a handle to the pots, the handle and device being capable of supporting the combined weight of the pot, plant, bedding and water.

There are currently a number of devices on the market that enable a handle to be attached to a pot or other article. For example, a protrusion mounted on the side of the pot which mates with a corresponding hole in the handle upon the application of sufficient sideways force. However, due to the large manufacturing tolerances employed in the creation of these devices, it is often difficult and sometimes impossible to force the protrusion through the handle. When dealing with aquatic plants it is a disadvantage to be having to exert a sideways force, firstly because this may squash the plant, and secondly because it is more difficult for a user than inserting an element from above.

EP-A-0416671 describes a package having a handle for having granular or similar products. The container has side walls, opposing side walls each having an opening through which a handle may be engaged. The handle has barbed ends, each barb having slits opening away from the barb tips to be engaged by material from the container wall surrounding the respective opening to retain the handle in place.

US-A-2289824 describes a tongue and slot connection between sheet material members, in which slots are provided in opposing walls of a container or structure of sheet material and a handle having bifurcated ends each having barbs and designed to be squeezed to allow insertion into a respective slot, after which the bifurcated parts open outwards to engage the material surrounding the slots.

In accordance with the present invention there is provided an aquatic plants container and a handle therefor, the handle having a container engagement portion at each end thereof, each engagement portion comprising a tongue tapering from a width greater than the width of an adjacent portion of the handle to a narrower portion at the free end and being provided with barb means, each engagement portion including an elongate aperture extending longitudinally with respect to the handle on either side of the barb means, the

engagement portions being engageable in a direction parallel to the central axis of the container which can be immersed in water in diametrically opposed slots in an upper portion of the container, the width of the slots being smaller than the width of the tongues at the barb means, such that when the tongues are inserted in respective slots, the barb means are compressed by flexure of the material of the engagement portion towards the aperture until the barb means have passed through the respective slots and snap outwardly into holding engagement with the material of the container defining the slots.

The material of the container at the ends of the slots is preferably formed with groove means adapted to be engaged by the barb means for location thereof. The groove means are preferably V-shaped grooves. The barb means may comprise a barb at each side of the tongue.

A specific embodiment of a container and a handle according to the present invention is now described, by way of example only, with reference to the accompanying drawings, in which:-

Figure 1 shows a side elevational view of a pot to which a handle, incorporating the device of the present invention, is attached;

Figure 2 shows an enlarged partly sectional and cut away view of a handle engagement portion of the pot and handle of Figure 1; and

Figure 3 shows a side elevational view of the engagement device of this invention in conjunction with a sectional view of the pot wall.

With reference to Figure 1, the device of the present invention is shown incorporated into a handle (2) which is shown engaging a container in form of a pot 1 with base 1a (partly shown) and sidewalls 1b. The pot 1 is moulded from a suitable plastics material, as is the handle 2, although other materials may be used. A lip 8 is provided on the side wall 1b. At the points where the handle 2 enters the lip 8, the lip 8 is enlarged in a direction away from the center of the pot so as to create sufficient space for formation of a slot 10 through which the handle 2 is engaged.

Figure 2 is an elevational view of a handle engagement portion 3 of Figure 1. A tongue 4 is formed integrally with and at each end of the handle 2 and engages the pot 1 through the slot 10 in the lip 8 of the pot side-wall 1b. The tongue 4 is symmetrical about the line II-II. The tongue 4 tapers to a rounded end 7, and the thickness of the tongue 4 also tapers towards the end 7 which is approximately half the thickness of the handle 2 so as to ease location of the tongue within the slot. Tapered edges 12, 13 of the tongue 4 end in barbs 6. The tongue 4 is formed with an elongate aperture 5. It will be appreciated that the aperture 5 may be of a different shape. The aperture 5 may be located between the barbs 6 so that the wall of the tongue 4 may flex

inward towards the aperture 5 when pressure is applied to the barbs 6.

The slot 10 has a pair of end walls 9. The end walls 9 each have a generally V shaped depression located in the base thereof on the edge opposite the lip 8 of the pot 1. The depressions are of a shape corresponding to the profile of the barbs 6, and figure 2 shows in detail barb engagement in the depressions. The barbs 6 are capable of engaging the respective V shaped depressions thereby securely locking the handle 2 in the pot 1 and lip 8, and preventing the unauthorised withdrawal of the tongue 4 through the slot 10. The tongue 4 has a maximum lateral width along the line joining the barbs 6. At this point, the width of the tongue is appreciatively larger than the width of the slot 10. Thus, when the rounded end 7 of the tongue 4 is passed through the slot 10, the lower portion of the barbs 6 comes into slideable frictional contact with the edge of the slot 10. Continued pressure on the handle 2 and tongue 4 causes an elastic deformation of material of the tongue on either side of the aperture 5 so that the barbs to pass through the slot 10, at which point the tongue returns to its original shape. The barbs will now be capable of engagement with the end walls 9 thereby preventing removal of the handle 2 from the pot 1.

Figure 3 is a side view showing the tongue 4 engaged in the slot 10 in the lip 8 of the pot 1. In this Figure the reduced thickness of the rounded end 7 compared with the tongue 4 which facilitates the location of the rounded end 7 within the slot 10. If the handle is to be removed from the pot 1 at any stage, it would be possible to cut the handle with a suitable tool. Once the handle has been cut, the tongue and attached handle may be drawn towards the base of the pot and removed.

Numerous modifications may be made without departing from the scope of the invention. Furthermore, the pot need not necessarily be a pot, the engagement mechanism could be located in a basin or tray or other such carrying device.

In addition to the above, it is the applicants intention to provide a display area on the handle for the non-removable display of prices or other such information.

#### Claims

1. Aquatic plants container (1) immersable in water and a handle (2) therefor, the handle (2) having a container engagement portion (3) at each end thereof, each engagement portion comprising a tongue (4) tapering from a width greater than the width of an adjacent portion of the handle (2) to a narrower portion at the free end (7) and being provided with barb means (6), each engagement portion (3) including an elongate aperture (5) extending longitudinally with respect to the handle (2) on either side of the barb means (6), the engagement portions (3) being engageable in a direction parallel to the central axis of the container (1) which can be immersed in water in diametrically opposed slots (10) in an upper portion of the container (1), the width of the slots (10) being smaller than the width of the tongues (4) at the barb means (6), such that when the tongues (4) are inserted in respective slots (10), the barb means (6) are compressed by flexure of the material of the engagement portion (3) towards the aperture (5) until the barb means (6) have passed through the respective slots (10) and snap outwardly into holding engagement with the material of the container defining the slots (10).
2. A container and handle as claimed in claim 1 wherein said container material at the ends of said slots (10) is formed with groove means adapted to be engaged by the barb means (6) for location thereof.
3. A container and handle as claimed in claim 2 wherein said groove means are of v-shaped cross-section.
4. A container and handle as claimed in any one of claims 1 to 3 wherein said barb means (6) comprises a barb provided on either side of the tongue (4).
5. A container and handle as claimed in any one of claims 1 to 4 comprising a display area on said handle for a label.

#### Patentansprüche

1. Wasserpflanzenbehälter, der in Wasser eintauchbar ist, und ein Griff (2) hierfür, wobei der Griff (2) an jedem seiner Enden einen Behälter-Eingriffsabschnitt (3) aufweist, wobei jeder Eingriffsabschnitt eine Zunge (4) umfaßt, die sich von einer Breite, die größer als die Breite eines benachbarten Abschnitts des Griffs (2) ist, zu einem schmaleren Abschnitt des freien Endes (7) verjüngt und mit einem Widerhakenmittel (6) versehen ist, wobei jeder Eingriffsabschnitt (3) eine längliche Öffnung (5) besitzt, die sich auf jeder Seite des Widerhakenmittels (6) bezüglich des Griffs (2) in Längsrichtung erstreckt, wobei die Eingriffsabschnitte (3) in einer Richtung parallel zu der Mittelachse des Behälters in einem oberen Abschnitt des Behälters (1) mit diametral gegenüberliegenden Schlitzten (10) in Eingriff bringbar sind, wobei die Breite der Schlitzte (10) kleiner ist als die Breite der Zungen (4) an dem Widerhakenmittel (6) derart, daß wenn die Zungen (4) in jeweilige Schlitzte (10) eingesteckt werden, das Widerhakenmittel (6) durch Biegung des Materials des Eingriffsabschnittes (3) in Richtung der Öffnung (5) zusammengedrückt wird, bis das Widerhakenmittel (6) die jeweiligen Schlitzte (10)

- passiert hat und in Halteeingriff mit dem die Schlitz (10) definierenden Material des Behälters außen einschnappt.
2. Behälter und Griff nach Anspruch 1, wobei das Behältermaterial an den Enden der Schlitz (10) mit einem Nutenmittel versehen ist, das zum Eingriff durch das Widerhakenmittel (6) ausgebildet ist, um dieses festzulegen.
  3. Behälter und Griff nach Anspruch 2, wobei das Nutenmittel einen V-förmigen Querschnitt aufweist.
  4. Behälter und Griff nach einem der Ansprüche 1 bis 3, wobei das Widerhakenmittel (6) auf jeder Seite der Zunge (4) einen Widerhaken aufweist.
  5. Behälter und Griff nach einem der Ansprüche 1 bis 4 mit einer Anzeigefläche auf dem Griff für ein Etikett.
3. Récipient et poignée selon la revendication 2, dans lesquels lesdits moyens de rainure ont une section en forme de V.
  4. Récipient et poignée selon l'une quelconque des revendications 1 à 3, dans lesquels lesdits moyens de crochet (6) comportent un crochet prévu de chaque côté de la patte (4).
  5. Récipient et poignée selon l'une quelconque des revendications 1 à 4, comportant une zone de visualisation sur ladite poignée pour une étiquette.

### Revendications

1. Récipient pour plantes aquatiques (1) pouvant être immergé dans l'eau et poignée (2) pour celui-ci, la poignée (2) ayant une partie d'engagement de récipient (3) à chaque extrémité, chaque partie d'engagement comportant une patte (4) qui se rétrécit d'une largeur plus grande que la largeur d'une partie adjacente de la poignée (2) à une partie plus faible à l'extrémité libre (7) et étant pourvue de moyens de crochet (6), chaque partie d'engagement (3) comprenant une ouverture allongée (5) qui s'étend longitudinalement par rapport à la poignée (2) de chaque côté des moyens de crochet (6), les parties d'engagement (3) pouvant être engagées dans une direction parallèle à l'axe central du récipient (1), qui peut être immergé dans l'eau, dans des fentes diamétralement opposées (10) dans une partie supérieure du récipient (1), la largeur des fentes (10) étant inférieure à la largeur des pattes (4) au niveau des moyens de crochet (6), de sorte que, lorsque les pattes (4) sont insérées dans des fentes respectives (10), les moyens de crochet (6) sont comprimés par flexion de la matière de la partie d'engagement (3) vers l'ouverture (5) jusqu'à ce que les moyens de crochet (6) soient passés à travers les fentes respectives (10) et s'accrochent extérieurement en engagement de maintien avec la matière du récipient définissant les fentes (10).
2. Récipient et poignée selon la revendication 1, dans lesquels ladite matière de récipient aux extrémités desdites fentes (10) est formée avec des moyens de rainure prévus pour être engagés par les moyens de crochet (6) pour le positionnement de ceux-ci.

FIGURE 1

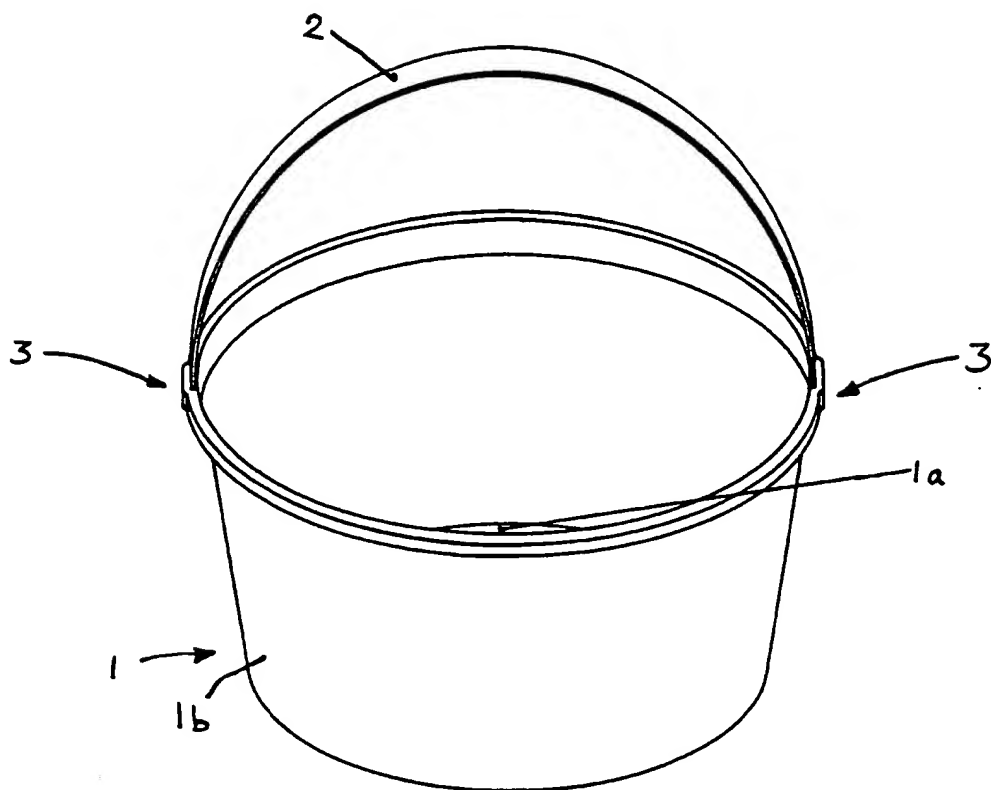


FIGURE 3

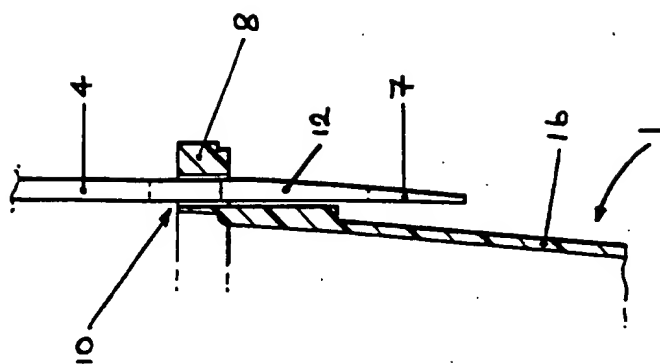


FIGURE 2

